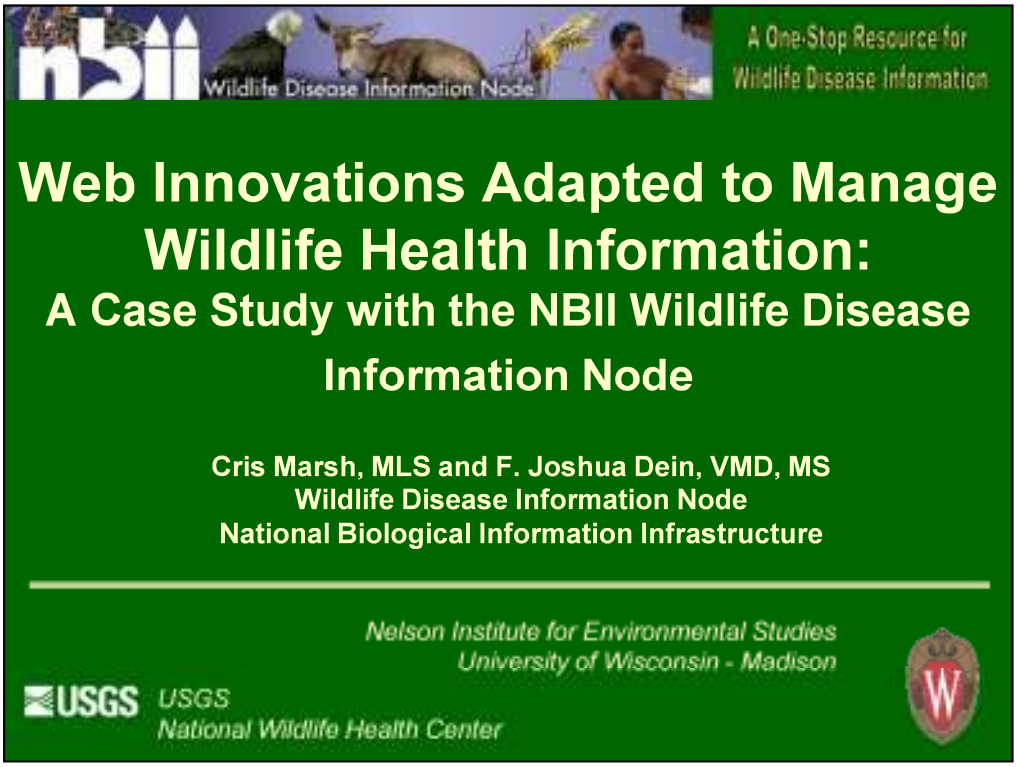



Hello I am Cris Marsh. I am the Content Manager for the Wildlife Disease Information Node, or WDIN as we affectionately call it. I want to thank OFWIM for the opportunity to speak with you. Today I am going to talk you about how WDIN has implemented web 2.0 technologies to help our users find, consume and manage information more effectively.

**Web Innovations Adapted to Manage Wildlife Health Information: A Case Study with the NBII Wildlife Disease Information Node**

Like other professionals, wildlife managers are inundated with information; some of which is helpful, while too much of it is not. In either case, valuable time is spent sifting through information to find what is needed; time that could be spent on other priorities. The NBII Wildlife Disease Information Node (WDIN) has adopted a number of innovative, open source web-tools and social networking products to help its users, wildlife specialists and other professionals concerned about wildlife health issues to more effectively find, consume and manage information.

The open source applications WDIN has adopted include blogs, RSS feeds, social bookmarking, and the Google Maps API. These kinds of tools are products of the Web 2.0 trend to use the Internet and its web services for information exchange and collaboration, and hence have a broader scientific application.

WDIN is building a suite of tools which are not only beginning to centralize wildlife disease information for easy access, but also allow users to decide how they want the information presented for their individual needs. In addition to reviewing how these tools evolved and continue to adapt to changing user needs, there will be an overview of how these same tools also help to increase the visibility of WDIN by drawing the attention of new users and new partners.


Here is quick overview of what I am going to cover.

First, I'll discuss **why** WDIN decided to explore these new tool and services for social networking and information exchange have evolved because people want more from the Internet.

Next, I'll show you which web 2.0 applications we adopted and modified to try to meet the needs of our users.

Lastly, I'll provide an overview of next projects we are interested in tackling. If you see or hear something that you think would be of helpful to your organization, let me know.


So to begin with I wanted share our vision of WDIN. We want to grow beyond just being a website warehousing information, to which new content is added now and again. We are striving to make a WDIN an online community where members can connect with people and content. We decided to start by exploring how we could help people connect to our content by looking for ways to give our users control over how they wanted to interact and take in information.

This led us to a few conclusions:

1) People are busy and they don't have time to regularly return to a site to see what has been added or updated. People needed ways to get WDIN information and data push to them in formats that could be easily scanned or browsed.

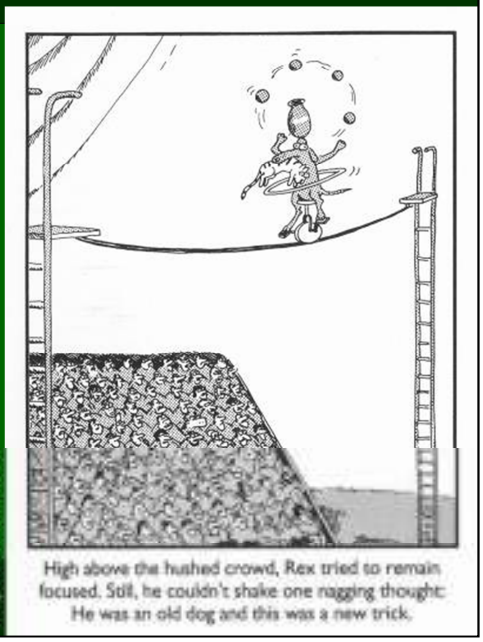
2) Most of content on our site is stored in a database and with these new web applications our data could be used for more than just generating output displays on a web page.

3) Through a little innovation we could free our content from confines of the site so that people, including us could **Connect, Control, Reuse, Update and Port** its information more easily.

## WEB 2.0

***New, fun tools connecting people to content***

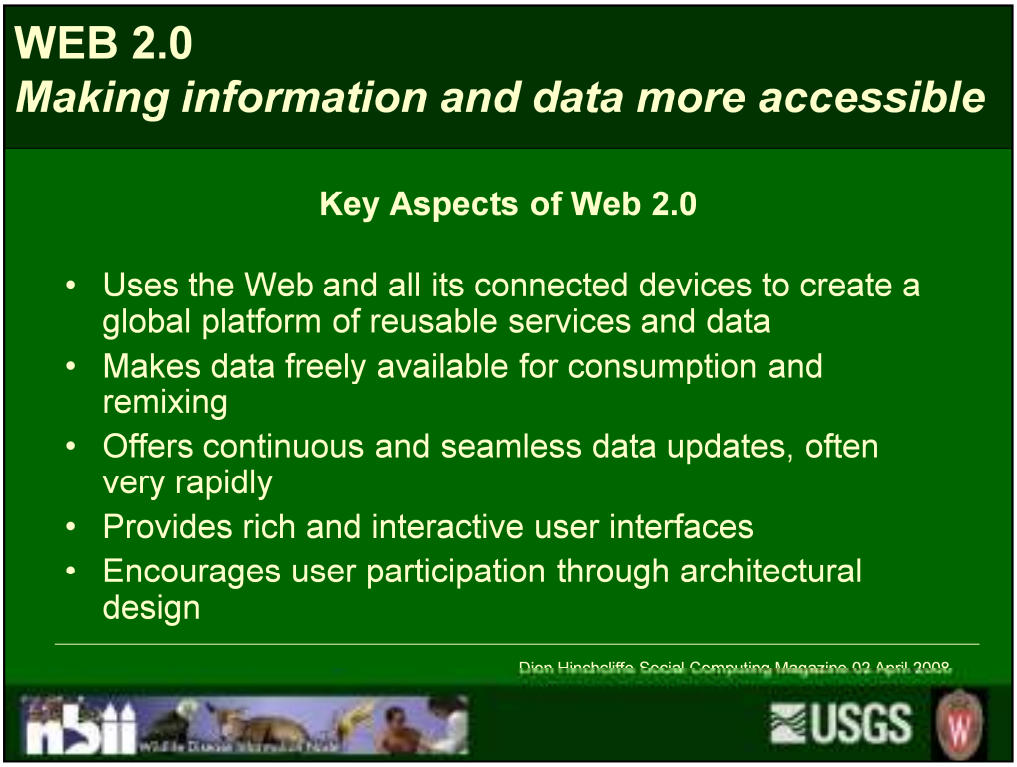
The Web is learning new tricks




This new buzz word Web 2.0, what does it mean? For WDIN, we take its broadest context, in that it describes the transition of the Internet from being just a collection of websites, isolated silos of information, loosely connected through hyperlinks, to becoming more fluid where data and information can be exchanged and integrated.

For example, have you ever visited a site and they offer some great information but its not useable in its current form because it is stuck in a pdf or static table. The only way to get to it is by cutting and pasting into something else or scraping it off their page.

These Web 2.0 applications begin to address some of these problems by freeing-up the information and allowing people not only to access them but combine them with other sources of information.




These are the key aspects of the web 2.0 that WDIN considered as we evaluated which applications we should adopt that would make the greatest use of our records in our content management system and provide the largest benefit to our users for the least about of cost and labor.

http://web2.socialcomputingmagazine.com/the_state_of_web_20.htm


We can take advantage of many of these new web innovations because our website is database driven.

When we find a resource (a map, website, report or image) that we want to include in the WDIN site collection, we use a home grown content management tool, called a cataloging or input tool, to enter over 20 fields of information about that resource (title, description, keywords, geographical location, format type). Time is spent up front indexing the record in detail, but it is only done once. Properly parsed and stored it can be reused many times, in many places with almost any application.


Using the fields of information we collect on a resource we were able to create a number of RSS feeds. This allowed our users who have RSS readers to easily discover what new content we have added to the site without ever having to come back to the site.


We collect all kinds of resources for WDIN site included news reports of wildlife disease outbreaks and or spreading. One of the fields we index is  geographical location. With that along with some other data elements, we were able to create a GeoRSS feed that provides the data that generates our Global Wildlife Disease News Map.

For you mapmakers out there we also make the KML files available for the Google Earth web application.

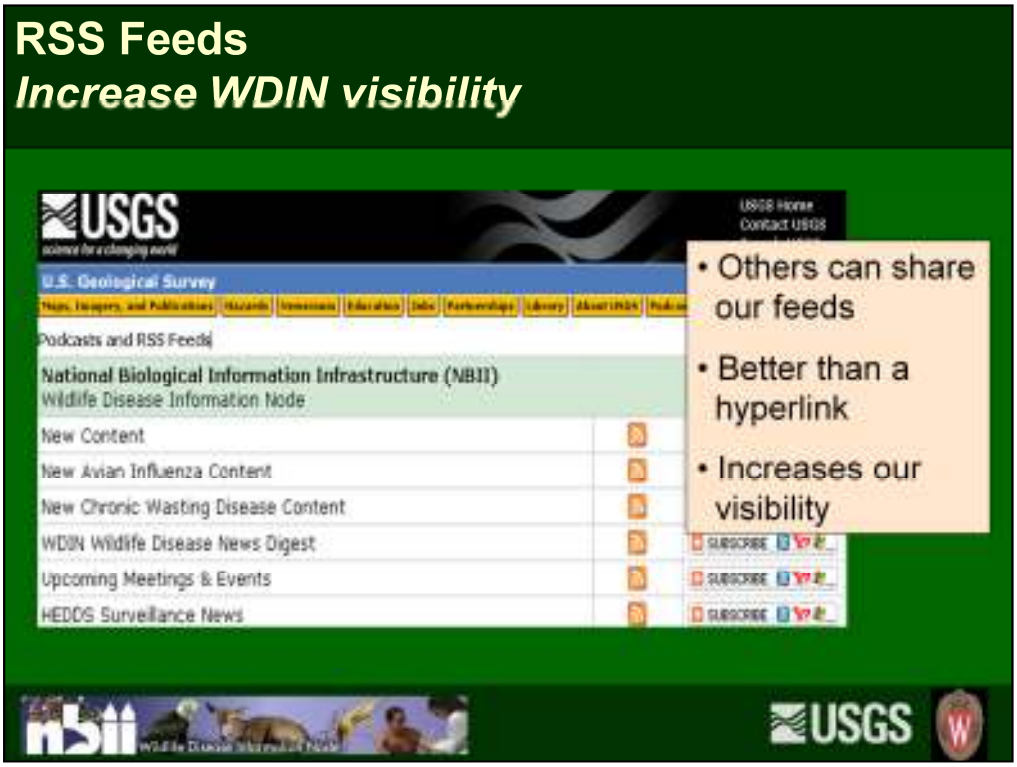
## RSS Feeds
### *Others can use WDIN information*


**HealthMap**

- Take news from disparate media sources on human diseases and maps it
- Initiative of Harvard-MIT and the Children's Hospital Informatics Program in Boston
- Added WDIN GeoRSS feed to join human, domestic animal and wildlife disease news events into a comprehensive view
- http://www.healthmap.org

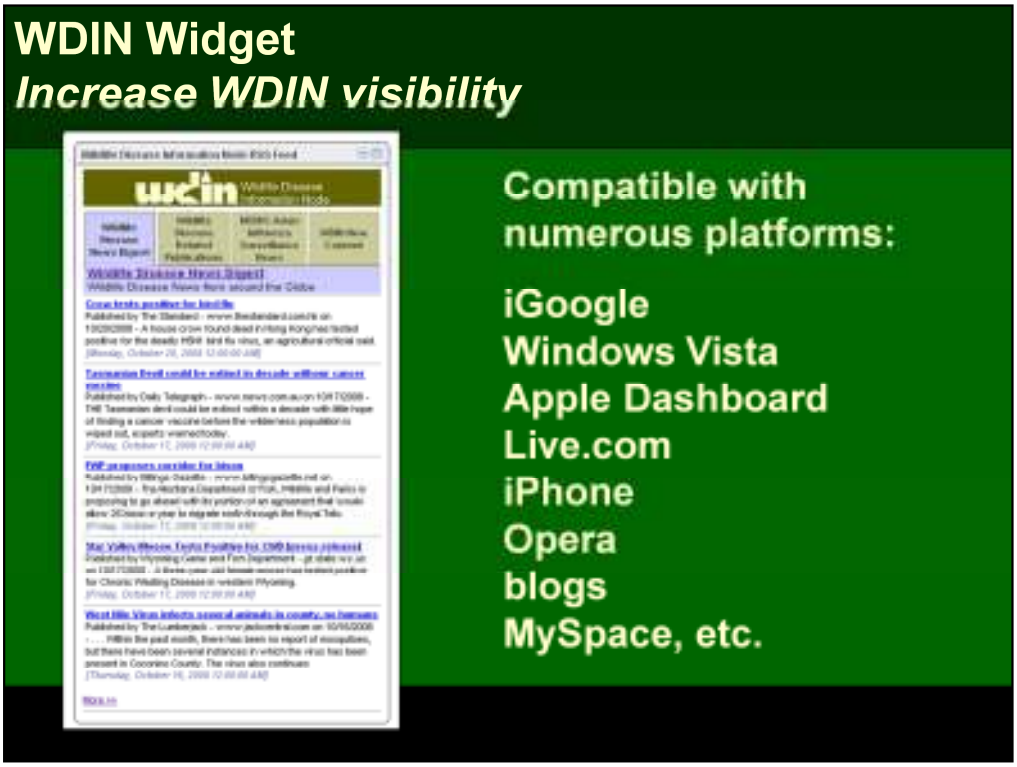
Because we constructed our GeoRSS feed using accepted standards and made it freely available, others can pick it up and integrate it with other data elements, which is exactly what the people at HealthMap did.

HealthMap brings together disparate news sources on disease events. Mostly covering human and domestic animals disease and only some wildlife. By adding our GeoRSS feed they enhanced the coverage of wildlife disease and combined with their other feeds to give a clearer picture of the global status of disease. In addition, we've gotten a little free publicly which helps to increase our visibility.



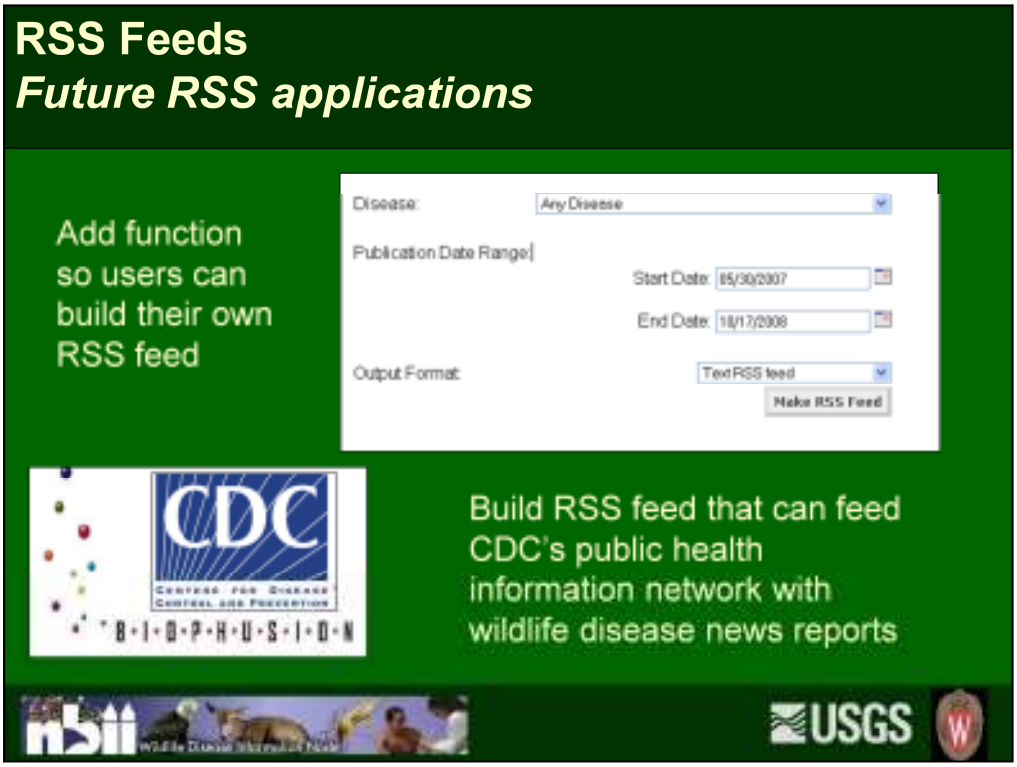

Instead of simply hyperlinking to WDIN, other sites can share our RSS feeds and quickly let people know what kind of content we offer.

Here the USGS added us to their library of RSS feeds.




Yes, WDIN has a widget. With little effort, we repackaged 4 RSS feeds into a tabular widget using the Universal Widget API from Netvibes.

Anyone can add this widget to their iGoogle page or to any of the other compatible platforms.




Here are some other projects we are working on that utilize our RSS feeds:

1) One idea we would like to create a function on WDIN that would enable our users to build their own RSS feeds to extract specific content they are interested in an format they prefer (such as text or map layer).

2) We are working with CDC to try use data elements from disease news reports we are already are collecting and create a specific feed that will bring zoonotic disease news reports to the CDC's public health information network, BioPHusion.

The benefit of this partnership is it builds up WDIN's visibility and lets people know outside the wildlife health community that WDIN is a source for wildlife disease news and data. In addition, it opens other doors that could lead to future collaborations with human health and domestic animal veterinary organizations for the exchange of information for a better understanding of disease prevention and control.


Using the publishing application blogger.com, WDIN has created a news delivery service. Almost daily, the staff combs through authorities news sources and pulls together a collection of wildlife disease news reports. We give our readers a number of ways to receive this daily summary, by email, RSS feed or widget.

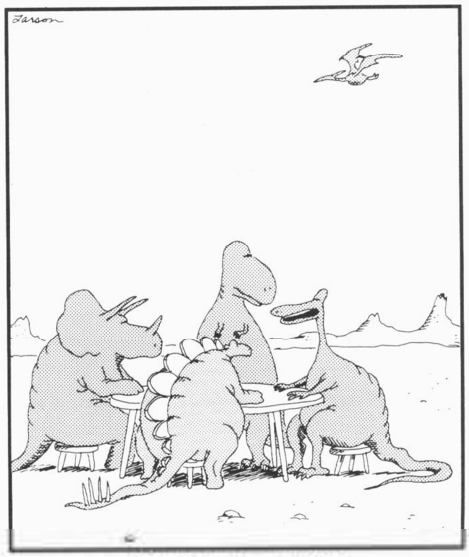
I would like to point out that the News Digest and the News Map are companion application. You'll notice the link to Map here. As I mentioned earlier, stories that mention the location of a disease spread or outbreak are indexed and placed on our Global Wildlife Disease News Map.

## Wildlife Disease News Digest
## *A reuse of WDIN RSS Feeds*


Just wanted to highlight how reusable and portable our RSS feeds are. We can pull in feeds from our site to let people quickly see what is new.

These feeds are freely available so anyone is welcome to use them on their own site, blog or homepage, or any other platform. It is all about getting the information out there where it can be used.

## Looking to the future
## *What fun, useful tools are on the horizon?*

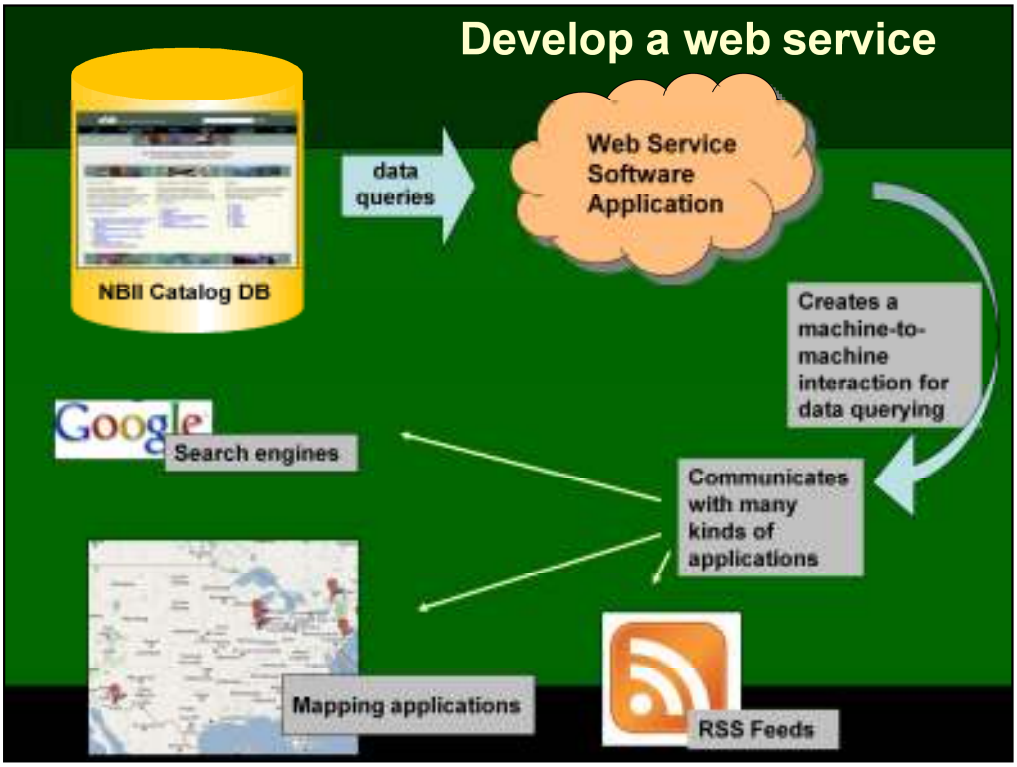



"Well, time for our weekly brain-stem-storming session."

Gary Larson's Far Side

**What kind of tools/service can we develop that our users will find helpful?**

USGS

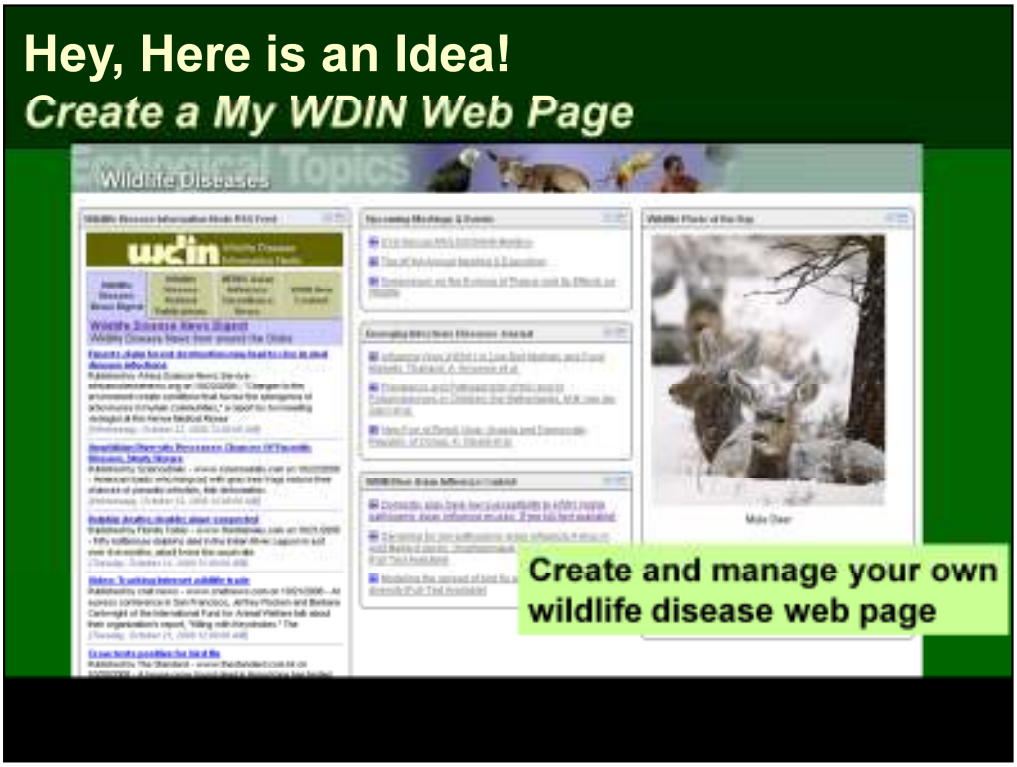



One of the biggest, and I think the most creative and ambitious idea is developing a web service. NBII, WDIN, SAIN and hopefully some other nodes (that is a hint for any NBII folks out there) are teaming up to create a web service that will work off of the NBII's record catalog.

This is an exciting development because once complete this very flexible application can be used by non-technical NBII staffers and partners to created targeted queries from the catalog and then allowing them to control the result output format. In this image the output examples are search results, a map and RSS feeds, but there are many other possibilities.

In fact we are looking for help and ideas. If you have thoughts on other applications that could be used to display and integrate NBII catalog records, please catch up with me later or stop by afterwards.

Some NBII technical people are planning on get together during the December NBII Developers Meeting in Denver to start defining the requirements for this application.

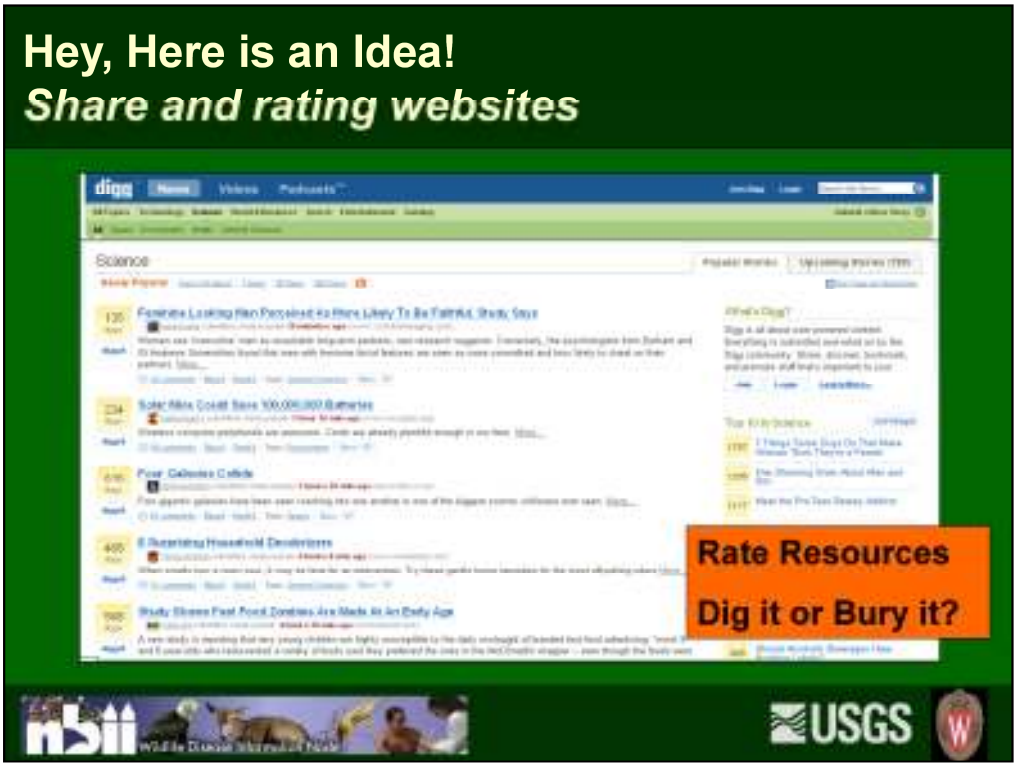



Using iGoogle as an example, WDIN is thinking about creating a My WDIN homepage that users could customize using both WDIN content along with any other outside content that is freely available. Much of the content on WDIN right now is or can be converted to RSS feeds or another formats which allows the information to be streamed in and a plopped onto a portal page.

This is example here is populated with the WDIN's widget and feeds from the our events calendar and newly added avian influenza content. It also has a feed from ahead of print articles from the Emerging Infectious Diseases journal and wildlife photos from National Geographic.

Anytime new content is added to one of these sources, it will show up on this homepage when refreshed.


This is a screenshot of how Google lets its user search for content to add to a homepage. WDIN could do something similar.




This is a screenshot of Digg a popular news aggregator. People submit news items to this site and the other folks come along and rate it. The more votes a story gets the higher up on the list it goes. People can also add comments about the article or email it to a friend.

WDIN was thinking of doing something similar and letting our community of users decided what resources are more helpful. The more votes, the more prominent the resource would become on the site. If something receive poor reviews or rated low, WDIN could consider weeding it out of its site collection.

# Thank You For Your Attention!


Questions? Comments? Suggestions?

Please contact me -

Cris Marsh

608.270.2459

cmarsh@usgs.gov